



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,551	07/28/2006	Hiddenari Sakaguchi	P29137	9501
7055 7590 09/10/2007 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			EXAMINER BASHAW, HEIDI M	
			ART UNIT 3709	PAPER NUMBER
			NOTIFICATION DATE 09/10/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

Office Action Summary

Application No.

10/564,551

Applicant(s)

SAKAGUCHI, HIDENARI

Examiner

Heidi M. Bashaw

Art Unit

3709

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/26/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4, 6, 9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Oxman et al. 5,718,577 (Oxman).
3. Re claim 1, Oxman discloses a light-emitting device for medical use that is composed of resin comprising illuminant or fluorescence substance (col. 4, ll. 20-21)(col. 5, ll. 43-45).
4. Re claim 2, Oxman discloses the device which is a light-emitting device for the oral cavity that is composed of a mouthpiece comprising illuminant or fluorescence substance (col. 4, ll. 20-21)
5. Re claim 4, Oxman discloses the light-emitting device for the oral cavity wherein the mouthpiece comprising illuminant or fluorescence substance is obtained by applying illuminant or fluorescence substance to a mouthpiece (col. 5, ll. 49-52).
6. Re claim 6, Oxman discloses the device wherein the illuminant or fluorescence substance is a bioluminescent/chemiluminescent agent (col. 5, ll. 29-31).
7. Re claim 9, Oxman discloses the illuminant or fluorescence substance is a bioluminescent/chemiluminescent (col. 5, ll. 29-31).

8. Re claim 11, Oxman discloses the illuminant or fluorescence substance is a bioluminescent/chemiluminescent (col. 5, ll. 29-31).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oxman et al. 5,718,577 (Oxman) in view of Schwartz 6,499,995.

11. Re claim 3, Oxman does not teach the light-emitting device for the oral cavity wherein the mouthpiece comprising illuminant or fluorescence substance is obtained by mixing resin with an illuminant or fluorescence substance and molding the resulting resin.

12. Schwartz teaches the light-emitting device for the oral cavity wherein the mouthpiece comprising illuminant or fluorescence substance is obtained by mixing resin with illuminant or fluorescence substance and molding the resulting resin (col. 3, ll. 3-7, 24-29). Although the method of making the apparatus is given little patentable weight. Schwartz teaches the method of mixing resin with an illuminant or fluorescence substance and molding the resulting resin.

13. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Oxman in view of Schwartz using the method taught by Schwartz to make the apparatus of Oxman.

14. Re claim 10, Oxman teaches the illuminant or fluorescence substance is a bioluminescent/chemiluminescent (col. 5, ll. 29-31).

15. Claim 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oxman et al. 5,718,577 (Oxman) in view of Navak 6,299,441.

16. Re claim 5, Oxman does not teach the light-emitting device for the oral cavity wherein the illuminant or fluorescence substance is removably applied to the mouthpiece.

17. Navak teaches the light-emitting device for the oral cavity wherein the illuminant or fluorescence substance is removably applied to the mouthpiece (col. 1, ll. 62-67).

18. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Oxman in view of Navak in order to reuse the mouthpiece once the illuminant fades as taught by Navak (col. 1, ll. 22-23, 26-28).

19. Re claim 12, Oxman teaches the illuminant or fluorescence substance is a bioluminescent/chemiluminescent (col. 5, ll. 29-31).

20. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oxman et al. 5,718,577 (Oxman) in view of Ganz et al. 7,107,996 (Ganz).

21. Oxman does not teach the bioluminescent/chemiluminescent agent is lucigenin

22. Ganz teaches the bioluminescent/chemiluminescent agent is lucigenin (col. 7, ll. 24-25)

23. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Oxman in view of Ganz in order to produce a light radiation of a cool variety to kill the microorganisms as taught by Ganz (col. 7, ll. 20-24).

24. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oxman et al. 5,718,577 (Oxman) in view of Schwartz 4,600,389.

25. Oxman does not teach the device wherein the light-storing fluorescence substance is europium.

26. Schwartz teaches the device wherein the light-storing fluorescence substance is europium (col. 2, ll. 50-52).

27. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Oxman in view of Schwartz in order to take advantage of the fact that europium excites in the near ultraviolet range and intensely emit in the visible range of the spectrum (col. 2, ll. 40-44) and the red fluorescent of europium which is a good contrast to the bluish fluorescence of teeth as taught by Schwartz (col. 2, ll. 50-54).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heidi M. Bashaw whose telephone number is 571-270-3081. The examiner can normally be reached on Mon-Fri (Alternate Fridays off) 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3709

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Uidi Barnau
HMB
9.05.07


KIMBERLY S. SMITH
PRIMARY EXAMINER
915107